

WHAT IS CLAIMED IS:

1. An image forming apparatus, comprising:
  - an image bearing member for bearing a toner image;
  - 5        an image forming unit for forming a toner image on said image bearing member;
  - an intermediate transfer member to which the toner image is primarily transferred from said image bearing member, said intermediate transfer member
  - 10       rotating while being in contact with said image bearing member;
  - an output unit for outputting information on a moving distance at a time when said intermediate transfer member rotates;
  - 15       a conveying unit which, in an attempt to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on a recording material, starts conveyance of the recording material at a predetermined timing;
  - 20       a calculation unit for calculating the predetermined timing on a basis of the information on the moving distance which is output by said output unit at a time when a rotation speed of the intermediate transfer member is switched from a first
  - 25       speed to a second speed lower than the first speed;
  - a storage unit for storing information on the predetermined timing calculated by said calculation

unit; and

a control unit for controlling a rotation of an intermediate transfer member and a conveyance of a recording material by said conveying unit,

5            wherein, in a case in which a rotation speed of said intermediate transfer member is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner image on said intermediate transfer member to the  
10           predetermined position on the recording material, said control unit controls said conveying unit to start the conveyance of the recording material at the predetermined timing stored in said storage unit.

15           2. An image forming apparatus according to claim 1,

             wherein said calculation unit calculates the predetermined timing in a preparation operation which is executed before said image forming unit forms an  
20           image on said image bearing member.

             3. An image forming apparatus according to claim 1, further comprising:

             a drive motor for rotating said intermediate  
25           transfer member; and

             a motor rotation number detection unit for detecting a number of rotations of said drive motor,

wherein said output unit outputs the information on the moving distance on a basis of the number of rotations of said drive motor detected by said motor rotation number detection unit.

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4. An image forming apparatus according to claim 1, further comprising a toner image detection unit for detecting the toner image on said intermediate transfer member, wherein:

10       said toner image detection unit detects plural toner images which are formed on the image bearing member by the image forming unit at predetermined intervals, the plural toner images being primarily transferred onto said intermediate transfer member;  
15       and

      said output unit outputs the information on the moving distance on a basis of a result of the detection of the plural toner images formed at the predetermined intervals which are detected by said  
20       toner image detection unit.

5. An image forming apparatus according to claim 1, wherein:

      said calculation unit calculates a first  
25       predetermined timing on the basis of the information on the moving distance which is output by the output unit at the time when the rotation speed of the

intermediate transfer member is switched from the first speed to the second speed lower than the first speed, and calculates a second predetermined timing on the basis of the information on the moving distance which is output by the output unit at the time when the rotation speed of the intermediate transfer member is switched from the first speed to a third speed lower than the second speed;

said storage unit stores information on the first predetermined timing and the second predetermined timing calculated by the calculation unit; and

said control unit controls the conveying unit such that the conveyance of the recording material is started at the first predetermined timing stored in the storage unit in the case in which the rotation speed of the intermediate transfer member is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner image on the intermediate transfer member to the predetermined position on the recording material, and controls the conveying unit such that the conveyance of the recording material is started at the second predetermined timing stored in said storage unit in the case in which the rotation speed of the intermediate transfer member is switched from the first speed to the third speed lower than the second

speed to secondarily transfer the toner image on the intermediate transfer member to the predetermined position on the recording material.

5           6. An image forming apparatus, comprising:  
          an image bearing member for bearing a toner image;

          an image forming unit for forming a toner image on the image bearing member;

10           an intermediate transfer member to which the toner image is primarily transferred from the image bearing member, the intermediate transfer member rotating while being in contact with the image bearing member;

15           an output unit for outputting pulse signals in a number corresponding to a moving distance at the time when the intermediate transfer member rotates;

          a conveying unit, in an attempt to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on a recording material, for starting conveyance of the recording material; and

          a control unit for controlling the rotation of the intermediate transfer member and the conveyance of the recording material by the conveying unit,

25           wherein, in the case in which the rotation speed of the intermediate transfer member is switched

from the first speed to the second speed lower than  
the first speed to secondarily transfer the toner  
image on the intermediate transfer member to a  
predetermined position on the recording material, the  
5 control unit controls the conveying unit to start the  
conveyance of the recording material as the number of  
pulses output by the output unit after the switching  
from the first speed to the second speed is started,  
has reached a predetermined number of pulses.

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7. An image forming apparatus according to  
claim 6, further comprising:

a drive motor for rotating the intermediate  
transfer member; and

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a motor rotation number detection unit for  
detecting the number of rotations of the drive motor,

wherein the pulse signals in the number  
corresponding to the moving distance, which are  
output by the output unit, are pulse signals in a  
20 number corresponding to the number of rotations of  
the drive motor which are detected by the motor  
rotation number detection unit.

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8. An image forming apparatus according to  
claim 6, further comprising:

a drive motor for rotating the intermediate  
transfer member; and

a roller rotation detection unit for detecting rotation of at least one of plural rollers which rotate the intermediate transfer member while stretching the intermediate transfer member,

5            wherein the pulse signals in the number corresponding to the moving distance, which are output by the output unit, are pulse signals in a number corresponding to the rotation of the roller which is detected by the roller rotation detection  
10    unit.

9. An image forming apparatus, comprising:  
an image bearing member for bearing a toner image;

15            an image forming unit for forming a toner image on the image bearing member;

an intermediate transfer member to which the toner image is primarily transferred from the image bearing member, the intermediate transfer member  
20    rotating while being in contact with the image bearing member;

an output unit for outputting pulse signals in a number corresponding to a moving distance at the time when the intermediate transfer member rotates;

25            a conveying unit, in an attempt to secondarily transfer the toner image on the intermediate transfer member to a predetermined position on a recording

material, for starting conveyance of the recording material; and

5 a control unit for controlling the rotation of the intermediate transfer member and the conveyance of the recording material by the conveying unit,

wherein, in the case in which the rotation speed of the intermediate transfer member is switched from the first speed to the second speed lower than the first speed to secondarily transfer the toner  
10 image on the intermediate transfer member to the predetermined position on the recording material, the control unit controls the conveying unit to start the conveyance of the recording material as the number of pulses output by the output unit after the formation  
15 of the toner image on the image bearing member in the image forming unit is started, has reached a predetermined number of pulses.

20 10. An image forming apparatus according to claim 9, further comprising:

a drive motor for rotating the intermediate transfer member; and

a motor rotation number detection unit for detecting the number of rotations of the drive motor,

25 wherein the pulse signals in the number corresponding to the moving distance, which are output by the output unit, are pulse signals in a



number corresponding to the number of rotations of the drive motor which are detected by the motor rotation number detection unit.

- 5           11. An image forming apparatus according to claim 9, further comprising:

          a drive motor for rotating the intermediate transfer member; and

- a roller rotation detection unit for detecting  
10 rotation of at least one of plural rollers for rotating said intermediate transfer member with giving a tension to said intermediate transfer member,

          wherein the pulse signals in the number corresponding to the moving distance, which are  
15 output by the output unit, are pulse signals in a number corresponding to the rotation of the roller which is detected by the roller rotation detection unit.

- 20           12. An image forming apparatus according to claim 9, further comprising an image processing unit which receives image data from an external apparatus and develops the image data,

          wherein said control unit controls said image  
25 forming unit to start formation of the toner image on the image bearing member as an instruction signal, which instructs to start the formation of the toner

image on the image bearing member in the image forming unit, is received from said image processing unit.